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10/749,926	12/30/2003	Nancy S. Borkowski	10559-876001 / P17395	6685

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EXAMINER
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NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2616

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,926	<b>Applicant(s)</b> BORKOWSKI, NANCY S.	
	<b>Examiner</b> PHUONGCHAU BA NGUYEN	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6-19-8.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 5,12,14,19 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,13,15-18,20 and 22-31 is/are rejected.
- 7) ☒ Claim(s) 5,12,14,19,21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claims 5, 12, 14, 19, 21 and 22 are objected to because of the following informalities:

-Claims 5, 12, 14, 19, 21, their statuses of "(withdrawn)" should be changed to ---(canceled)---

-Claim 22, line 3, "a coprocessor" should be changed to ---the coprocessor---.

Appropriate correction is required.

***Claim Rejections – 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4, 6-11, 13, 15-18, 20, 22-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Mannering (6,404,804).

Regarding claims 1 and 8,

Mannering (6,404,804) discloses a method for monitoring a digital subscriber line, the method comprising:

Applying, in a coprocessor (processor master DSP 22-fig.2), a logical mask to a status word (step 64-fig.7, for setting the bit in InMaskBuff to 1 for

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the received error location in the received word), the status word comprising a plurality of bits (in register CMD/STAT 30-fig.2), the coprocessor included in a packet engine (modem 20-fig.2) that represents an operation with a packet processor (computer D12/D14-fig.1) that include the packet engine, with the mask applied according to a monitoring scheme for the digital subscriber line (col.6, line 57-col.7, line 34, i.e., acknowledgement bit, status bit,...,etc..).

providing the packet engine the status of the bit (col.6, lines 24-26, and col.7, line 7-col.8, line 12).

Regarding claims 2, 9, 16, 23, 26, Mannering further discloses wherein monitoring the scheme for the digital subscriber line (col.6, line 57-col.7, line 34, i.e., acknowledgement bit, status bit,...,etc..) includes maintaining an indicator representing the status of the line (CMD/STAT 30-fig.2, for maintaining an indicator of the status of the bit; see also step 64-fig.7).

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Regarding claims 3, 10, 17, 24, 27, 30, Mannering further discloses wherein the monitoring the scheme for the digital subscriber line includes maintaining an index identifying the line (see steps 62–64, fig.7, wherein keeping the list of each error-free and error in the received word corresponding to location in bit).

Regarding claims 4, 11, 18, Mannering further discloses maintaining an indicator representing a completion of monitoring of the line (col.7, lines 43–50, wherein upon the completion of received command from command/status register 30, the modem will reset that same bit).

Regarding claims 6, 13, 20, Mannering further discloses wherein the bits represent servicing statuses of a digital subscriber lines (col.6, line 57–col.7, line 34, i.e., acknowledgement bit, status bit,..., .etc..).

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Regarding claims 7, 14, 21, Mannering further discloses wherein the bit is a portion of a word (see fig. 4, wherein bit is a portion of the word, i.e., checksum/CRC).

Regarding claim 15,

Mannering (6,404,804) discloses a line monitor (computer D14-fig.1) comprises:

a computing device executing (modem 20, fig.2):

a process to monitor a digital subscriber line by applying in a coprocessor (processor master DSP 22-fig.2) a logical mask to a status word (step 64-fig.7, for setting the bit in InMaskBuff to 1 for the received error location in the received word), the status word comprising a plurality of bits (in register CMD/STAT 30-fig.2), the coprocessor included in a packet engine (modem 20-fig.2) that represents an operation associated with a packet processor (computer D12D14-fig.1) that includes the packet engine, with the

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mask applied according to a monitoring scheme for a digital subscriber line (col.6, line 57–col.7, line 34, i.e., acknowledgement bit, status bit,...,.etc.); and

a process to provide the packet engine a status of the line (col.6, lines 24–26, and col.7, line 7–col.8, line 12).

Regarding claim 22,

Mannering (6,404,804) discloses a system (fig.1) comprising:

a coprocessor (processor master DSP 22–fig.2) included in a packet engine (modem 20–fig.2) that is capable of,

monitoring a digital subscriber line, by applying a *the* coprocessor, a logical mask to a status word (step 64–fig.7, for setting the bit in InMaskBuff to 1 for the received error location in the received word), the status word comprising a plurality of bits (in register CMD/STAT 30–fig.2) representing an operation associated with a packet processor (computer D12/D14–fig.1) that includes the packet engine, with the mask applied according to a monitoring



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scheme for the digital subscriber line (col.6, line 57–col.7, line 34, i.e., acknowledgement bit, status bit,...,.etc.); and

providing the packet engine a status of the line (col.6, lines 24–26, and col.7, line 7–col.8, line 12).

Regarding claim 25,

Mannering (6,404,804) discloses a packet forwarding device (computer 12, 14, fig.1) comprising:

an input port for receiving packets (not shown, but inherent therein the computer 12, 14–fig.1, since computers 12 and 14 having modems M12 and M14 for communicating with each other);

an output for delivering the received packets (not shown, but inherent therein the computer 12, 14–fig.1); and

a coprocessor (processor master DSP 22–fig.2) included in a packet engine (modem 20–fig.2) that is capable of,

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applying a logical mask to a status word (step 64–fig.7, for setting the bit in InMaskBuff to 1 for the received error location in the received word), the status word comprising a plurality of bits (in register CMD/STAT 30–fig.2) included in a packet engine representing an operation associated with a packet processor (computer D12/D14–fig.1) that includes the packet engine, with the mask applied according to a monitoring scheme for the digital subscriber line (col.6, line 57–col.7, line 34, i.e., acknowledgement bit, status bit,...,etc.), and providing the packet engine a status of the line (col.6, lines 24–26, and col.7, line 7–col.8, line 12).

Regarding claim 28,

Mannering (6,404,804) discloses a method comprising:

Applying, in a coprocessor, a logical mask to a status word (step 64–fig.7, for setting the bit in InMaskBuff to 1 for the received error location in the received word), the status word comprising a plurality of bits (in register CMD/STAT 30–fig.2), the coprocessor (processor master DSP 22–fig.2)

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included in a network processing engine (modem 20--fig.2) that represents the servicing availability of a digital subscriber line associated with a network processor (computer D12/D14--fig.1) that includes the network processing engine, with the mask applied according to a monitoring scheme for the digital subscriber line (col.6, line 57--col.7, line 34, i.e., acknowledgement bit, status bit,...,.etc..); and

providing the network processing engine data representing the servicing availability of the digital subscriber line (col.6, lines 24--26, and col.7, line 7--col.8, line 12).

### ***Claim Rejections – 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manning in view of Kerpez (7,106,833).

Manning does not disclose wherein the monitoring scheme for the digital subscriber line comprises a weight round robin scheme. However, in the same field of endeavor, Kerpez discloses implementation of round robin onto DSL, see col.4, lines 32–41 & col.10, lines 6–13. Therefore, it would have been obvious to an artisan to apply Kerpez's teaching to Manning's system with the motivation being to achieve highest overall throughput in a bundle of loops.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

a/. Applicant argued that Manning does not disclose monitoring a digital subscriber line by applying a in a coprocessor a logical mask.

In reply, the new ground of rejection is applied herewith, wherein step 64–fig.7, for setting the bit in InMaskBuff to 1 for the received error location in

the received word (for applying logical mask as claimed), see also 0028 of the original disclosure wherein status word is in bit.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONGCHAU BA NGUYEN whose telephone number is (571)272-3148. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PHUONGCHAU BA NGUYEN/  
Examiner, Art Unit 2616

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2616